GEOGRAPHIC NEWS BULLETINS

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Contents for Week of November 30, 1931. Vol. X. No. 21

1. Colombia Extends a Welcoming Hand to Visitors.
2. How a Botanist "Tames" Wild Plants.
3. Palermo, Sicily's Tropical City Far from the Tropics.
4. Great Smoky National Park Area Two-Thirds Complete.
5. Diamonds, Some Work and Some Merely Glitter.

© Photograph by A. W. Cutler.

BRILLIANT PAINTINGS ADORN THE SICILIAN "FLIVVER"

The shawl worn by the man is a feature of the peasant's dress in winter. The *carretta*, or cart, still in use by the Sicilians is constructed so that it fits with striking exactness into the chariot ruts of old Roman days. It is usually built of carved oak, ornamented with hammered metal work or bright paintings (See Bulletin No. 3).

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Colombia Extends a Welcoming Hand to Visitors

TOURIST travel is now a recognized factor in international trade. Visitors from the United States, Argentina, Canada and England, for instance, leave millions of their spare dollars, pesos and pounds in France, and in other parts of Europe. Now Colombia, our nearest South American neighbor, is extending a welcoming hand to strangers. In an attempt to attract tourists to the country, Colombia is establishing at Bogotá a Central Office of Touring, which will have branch offices at ports and in the larger interior cities, as well as in foreign countries.

Colombia, occupying the northwestern corner of South America, is the landward front door to the continent, but because its threshold is rugged mountains and thick forests travelers enter the Republic by way of its ports.

Burros Chief Transport of Interior

Colombia is nearly twice as large as Texas. The eastern half of the country is a grassy plain where, it is estimated, ten million head of cattle can be grazed. The remainder of the Republic is largely mountainous. Where the Andes cross Colombia's southern border, they spread out into three separate ranges which the Colombians call the Eastern, Central and Western Cordilleras.

Rich in natural resources, Colombia has been handicapped by poor transportation facilities. There are few good roads beyond the coastal zone and in the vicinity of Bogotá. There are fewer than 2,000 miles of railroads, and these are dotted over the eastern and central portions of the country in a dozen or more lines, from 25 to 100 miles long. In the interior burros are the chief commerce carriers where water transport is not available.

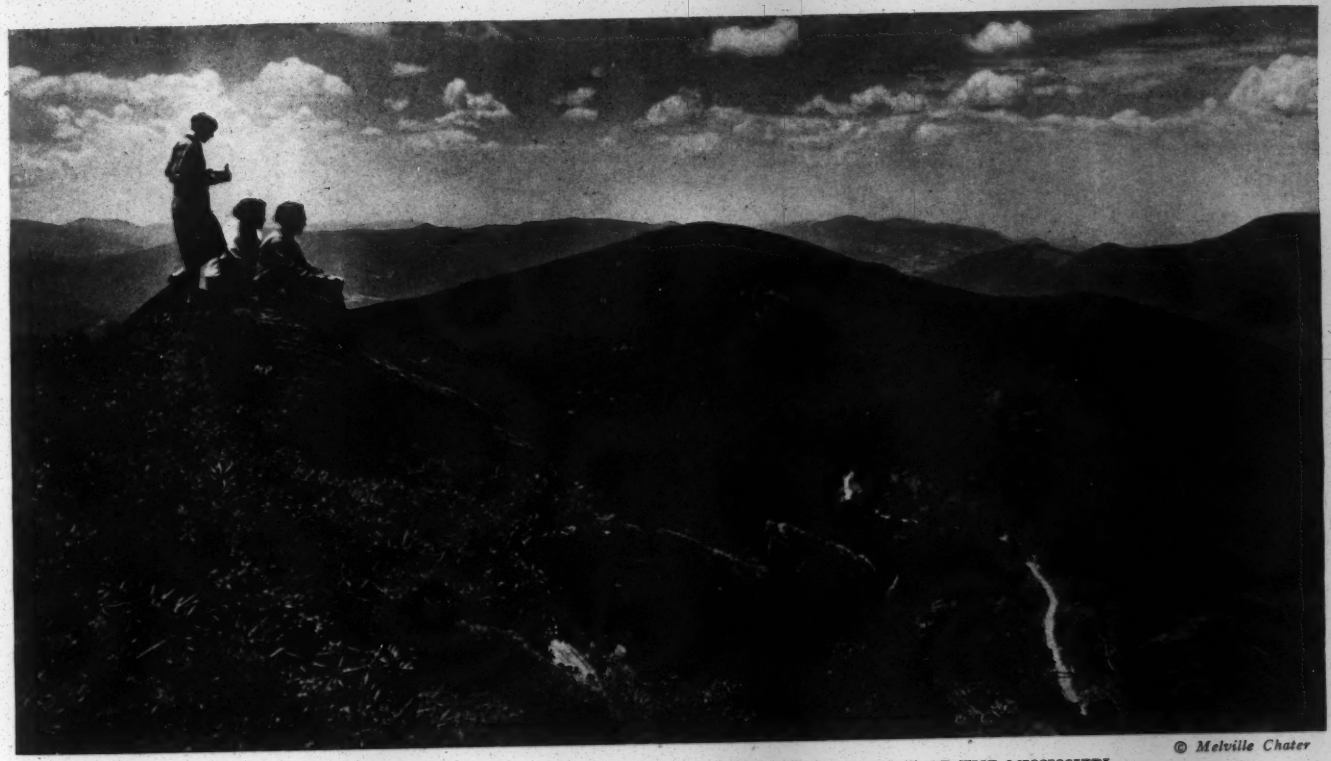
The Magdalena River is the Mississippi of Colombia. Sternwheelers plying the river bring to Barranquilla and Cartagena, Colombia's leading ports, the bulk of the country's commerce. Over their docks flow coffee, chicle, ipecac, hides, gold, silver, platinum, balsam, cacao, bananas, oil and vegetable ivory for world markets.

Land of the Emerald

Since the sixteenth century $700,000,000 worth of Colombian gold has been mined. Oil, a comparatively recent find, now flows from vast underground reservoirs at the rate of about 20,000,000 barrels a year. Coffee exports have reached a value of $75,000,000 in a year, and banana exports $10,000,000. Colombian hills yield most of the world's emeralds. Cotton, tobacco, rubber and iron figure in the country's trade.

The bulk of Colombia's 7,851,000 inhabitants are in the central and western portions of the Republic. Bogotá, capital and largest city, is situated a mile and a half high, in the Central Cordillera. It has upwards of 220,000 inhabitants.

Ten years ago a traveler, Bogotá bound, boarded a Magdalena River boat at Barranquilla, sailed up the river for more than 500 miles, transferred to a train which took him around the first rapids and then boarded a boat on the next river level for Girardot, where he boarded another train that deposited him in the capital. The trip took a week or more, depending upon river conditions. To-day one can make the trip in an airplane in several hours (see illustration, next page). Inci-



© *Melville Chater*

"THE LAND OF THE SKY," FROM MT. MITCHELL, HIGHEST PEAK EAST OF THE MISSISSIPPI

Mt. Mitchell is not within the proposed boundary of the new Great Smoky Mountains National Park, but it is the king of the Smokies, lord of all it surveys from an altitude of 6,711 feet. From this point of vantage the North Carolina-Tennessee borderland country unfolds on a vast scale, dipping away in mountains beyond mountains, fainter and fainter, toward the distant wisps whose hue gives a name to the entire Blue Ridge from Virginia to Georgia. (See Bulletin No. 4).

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How a Botanist "Tames" Wild Plants

AWARD to Dr. Frederick V. Coville of the George Robert White Gold Medal of Honor for "eminent service in horticulture" illustrates how the botanist helps plant new fruits and vegetables on our farms, saves our grazing areas, and introduces beautiful new flowers into our gardens and parks.

The medal, highest horticultural award in America, is bestowed annually by the Massachusetts Horticultural Society, oldest body of its kind in the United States.

Dr. Coville, botanist of the U. S. Department of Agriculture, and chairman of the research committee of the National Geographic Society, has won world scientific fame for a long series of botanical discoveries and experiments.

Once Desolate Areas Now Yield Valuable Crop

Some, such as "taming the wild blueberry" to grow on the pine barrens of New Jersey, have planted hitherto desolate areas with highly productive crops. Former waste lands last year yielded to markets 10,000 bushels of the blueberry which, only a few years ago, was found only in a wild state.

Other studies he made, such as that of a method of restricting sheep grazing in national forests, have conserved vast tracts of valuable forage, permitted their economic utilization, and yielded to the government as high as $2,000,000 a year for the grazing permits issued.

Many of his experiments, involving years of patient and ingenious research, form dramatic and romantic chapters in the history of botany and, as in his conclusions about the effect of cold in stimulating plant growth, seem to defy what previously had been regarded as "laws of Nature."

Bibliography of 146 Items—but Incomplete

A recent attempt at compiling a bibliography of Dr. Coville's scientific books, papers, reports and articles in scientific magazines—he has never attempted to catalog them himself—developed a list of 146 items; and the bibliographer stated that this list was "incomplete."

He is a co-author of "Standardized Plant Names," which gives authoritative names and spellings of 20,000 species and varieties of plants of the United States. A lake in Alaska, and a dozen or more plants, including the Creosotebush of the desert (Covillea) and a lupine of the California Sierras (Lupinus Covillei), are named for Dr. Coville.

Until Dr. Coville concluded his years of study and thousands of experiments the blueberry grew only wild, and small, as once did the cranberry. The more the stubborn blueberry was given the care, protection, nourishment and fertile soil on which most crops thrive, the faster it sickened and died.

Fungus Supplies Blueberry's Nourishment

Dr. Coville found that a minute fungus, invisible without a compound microscope, attaches itself to the roots of a healthy blueberry plant. This fungus apparently furnishes nitrogenous food to the blueberry bush. The blueberry will thrive only in an acid soil, leaf peat and sand for example, which is the exact opposite to the requirements of most cultivated plants.

Later experimentation showed the same principle applied to many important plants in ornamental horticulture, which hitherto had resisted cultivation, among them the trailing arbutus, the rhododendron, the mountain-laurel, the azalea, the pink ladyslipper, and the Franklinia tree.

There is a human, and sometimes humorous, touch in many of Dr. Coville's reports of his experiments. He tried "feeding" blueberry plants with skimmed milk—skimmed milk being a waste product of many farms—also with cream, and milk sugar.

"Feeding" a Plant with Buttermilk

"It is clear," he wrote, "that while skimmed milk, buttermilk, casein and whey are useful as fertilizers for blueberry plants, cream and sugar are not. These are still best utilized, in accordance with established practice, on the blueberries themselves fresh from the ice box."

While experimenting with the blueberry Dr. Coville developed another theory of wide application. He demonstrated the effect of cold in stimulating the growth of plants. He made an opening in the glass side of a greenhouse in early January, pushed through the opening one

dentally, airplanes now touch important commercial towns in the interior of Colombia, otherwise accessible only by hazardous burro trails.

Cartegena, Colombia's second Caribbean port, is one of the oldest cities in South America. It was nearly seventy-five years old when Hudson sighted Manhattan Island. In the sixteenth century it was called the "Queen City of the Spanish Main." Its storehouses bulged with products from the interior awaiting shipment to Spain. As a result its inhabitants frequently were forced to man the walls to discourage sea marauders.

Continent's Major "Two-Ocean" Country

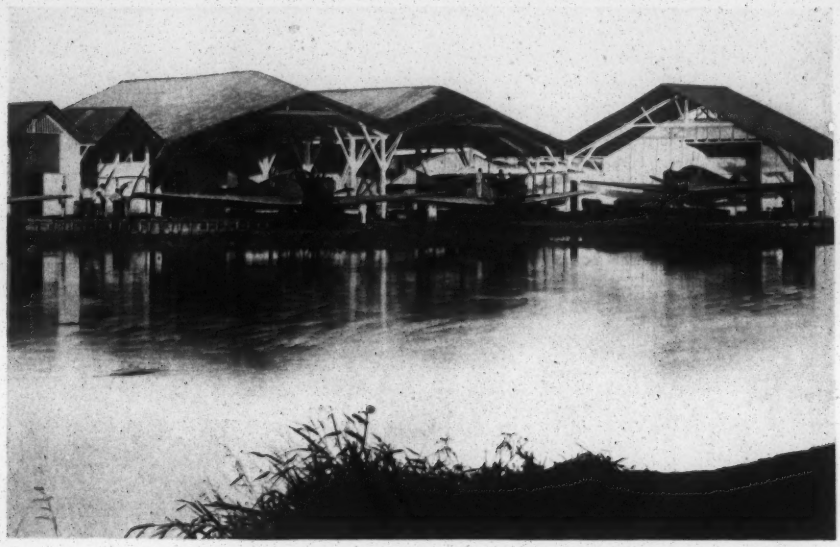
To-day, Cartagena has wide streets, electric lights, and plans have been drawn for modern sewers and a water system. Trams and automobiles are numerous and modern shops display modern merchandise. But here and there a bit of the city's old wall and the remains of its early fortresses recall its former days.

Cartegena has bowed to Barranquilla as Colombia's leading port. Barranquilla is at the mouth of the Magdalena, literally in the way of the bulk of Colombia's foregin trade. Cartagena lies about 60 miles west of the Magdalena, with which it is connected by a railroad and canal.

Colombia is the only country in South America that has an extensive coast on both the Atlantic and Pacific Oceans. Buenaventura, the only port of any consequence on the Pacific shore, is a child of the Panama Canal. From a rambling native settlement it has developed into a well-equipped port. From it a railroad runs to the rich agricultural and mineral regions on the western slopes of the Andes.

Note: See, also, "To Bogotá and Back by Air," by Colonel Charles A. Lindbergh, *National Geographic Magazine*, May, 1928; "Flying the World's Longest Air-Mail Route," March, 1930; "How Latin America Looks from the Air," October, 1927; and "Over the Andes to Bogotá," October, 1921.

Bulletin No. 1, November 30, 1931.



© *Scadta*

GERMAN AIR LINES LINK COLOMBIA'S CAPITAL WITH THE SEA

For more than three years these planes have maintained a dependable air service between Barranquilla, on the Caribbean Sea, and Bogotá, Colombia's inland capital. Before the airplane came, people often took many days making the 500-mile journey via river steamer and connecting rail lines. The hangars shown are on the banks of the Magdalena River at Barranquilla.

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Palermo, Sicily's Tropical City Far from the Tropics

THE beautiful castle of Zisa, near Palermo, Sicily, has been purchased as a national monument by the Italian Government. The castle was built in the twelfth century and has served as a residence of the Norman Kings, who there held many magnificent feasts and dances.

Palermo, the capital of Sicily, is on the northwestern coast of the island, which lies just beyond the "toe" of Italy's "boot." Its crescent-shaped harbor teems with shipping, for Palermo is one of Italy's busiest ports.

Once a Port of Phoenicians

Palermo has been an important maritime city for more than three thousand years. When the Phoenicians, one of the fifteen peoples that have ruled the island, settled there, they called the city Panormos (All Harbor). Then it occupied a small peninsula, shaped much like the State of Michigan, with a wide harbor nearly surrounding it. Later the silt from the inland mountains filled the harbor bed which now forms a part of the foundation of modern Palermo.

The trim, white ships of the steamship company that transports passengers from the Italian "boot" to Sicily, usually reach Palermo shortly after dawn, but Palermo appears wide-awake. Hundreds of citizens already are on the dock shouting greetings to the newcomers or announcing their business as representative of this or that hotel.

The passenger's first glance toward Palermo suggests the name La Felice (The Happy) that it has long borne and rightly deserves. The compactly-built city of more than 400,000 inhabitants resembles the playing field of an enormous natural athletic stadium with the suburban hills, dotted with palatial villas and citrus groves, forming the elevated sides.

In the Heart of the Lemon Belt

The stadium is the Conca d' Oro, or Golden Shell, the most fertile spot on the island, famous for its natural beauty. Here tropical growths flourish in the brilliant sunshine. Lemons, oranges, and sumac form the major part of Palermo's exports. Only the dark-skinned Sicilians, wearing their stocking caps, a distinctive part of the peasant dress, keep the visitor from imagining himself in southern Florida or southern California, although Palermo is in about the same latitude as Richmond, Virginia.

Palermo owes its two main thoroughfares to the Spaniards. The Corso Vitorio Emmanuele cuts through the center of the city from the sea to the green hills beyond. The Via Maqueda runs at right angles, intersecting it in mid-town.

Every Cart Is a Work of Art

In the street one sees every kind of conveyance from the street cleaning department's top-heavy cart, drawn by a tiny sympathy-provoking donkey, to the smartest trap of a London type. But none draw such attention as the Sicilian peasant carts that, in many respects, resemble our ordinary two-wheeled dump carts. Almost every inch of the exterior is painted with some religious, legendary, or historical theme. One panel may depict the Crucifixion or the Three Wise Men, and next to it a scene representing the discovery of America by Columbus, or the Sicilian Vespers.

Even the wheels, axles, shafts, body posts and tailboards are neatly worked

of two stems of a blueberry plant that had been kept indoors up to that time, and plugged the space about the opening with moss. When spring came the outdoor stem burst into leaf; the greenhouse stem showed neither leaf nor swelling buds.

Patiently he carried on these experiments until he found that the wild crab, the cranberry bush, the tamarack, trailing arbutus and the seeds of the bunchberry would not grow until chilled.

While in college, at Cornell, Dr. Coville received the senior medal as best all-around athlete at the State intercollegiate games.

Surveying America's "Fireless Cooker" Valley

Forty years ago he made the first botanical survey of Death Valley, publishing his findings which, ever since, has been the standard work on the plant life of that amazing region. This past summer he returned for another study of the vegetation of the area.

In 1899 Dr. Coville was botanist of the Harriman Alaska Expedition. He identified more than 1,000 plants of the Territory, and clarified the complex problem of the willows by classifying and describing twenty-five Alaskan kinds, in a paper which is cited as a model in the treatment of that kind of study.

A monument to Dr. Coville's extensive field work in studying adaptation of desert plants to their peculiar environment is the Desert Botanical Laboratory of the Carnegie Institution, at Tucson, Arizona, established and located in accord with his suggestions.

Many of the long list of Dr. Coville's scientific papers deal with highly technical subjects, such as "The Home of Botrychium Pumicola" and "The Effect of Aluminum Sulphate on Rhododendrons and other Acid-soil Plants." Others are of keen interest to the layman.

How Desert Dwellers "Drink" the Cactus

For example, there is one on "Wild Rice in Minnesota," a subject which touches such diverse groups as wild duck hunters and ethnologists. Water fowl and ducks feed on wild rice during their migrations southward. Growing of wild rice, it was found, is limited by the brackish content of streams and estuaries along the Atlantic seaboard. This factor is important in any effort to plant rice for the migrating birds. In Minnesota Dr. Coville found wild rice serving a very different purpose. It was the principal farinaceous food for some 30,000 Indians.

Another paper, illustrated, reads like a scientific "Believe It or Not." It relates how Indians live in the desert miles away from any apparent source of water. Photographs show how these desert dwellers cut off the top of a cactus and squeeze the moisture from its pulpy center. Knowledge of what kinds of cactus supply a palatable drink is valuable mental equipment for any desert traveler in certain deserts of our West.

Other recipients of the George Robert White Medal include Charles S. Sargent, originator of the Arnold Arboretum, in Boston; Michael Henry Walsh, originator of some of America's finest roses; Victor Lemoine, France's greatest breeder of lilacs and other ornamental shrubs; William Robinson, of Sussex, England, author of the most remarkable book ever printed on ornamental gardens; George Forrest, of Edinburgh, who explored Tibet and western China to bring ornamental plants back to Europe; John McLaren, father of the great and unique Golden Gate Park, in San Francisco; Liberty Hyde Bailey, the great encyclopedist of horticulture, of Cornell, and Dr. David Fairchild, agricultural explorer, of Washington.

Note: See also "The Wild Blueberry Tamed," *National Geographic Magazine*, June, 1916; and "Taming the Wild Blueberry," February, 1911.

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THE WHITE MEDAL, HIGHEST AMERICAN HORTICULTURAL AWARD

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Great Smoky National Park Area Two-Thirds Complete

WITH the acquisition of some 138,000 acres of land from the States of North Carolina and Tennessee early in November the new Great Smoky Mountains National Park is now two-thirds its ultimate size. Title to the land was presented to the Secretary of the Interior by the heads of two State commissions.

"Great Smokies," the largest National Park in the East, now covers 450 square miles of timbered mountainland along the border between North Carolina and Tennessee. Eventually the park will embrace some 580 square miles—about half the area of Rhode Island!

Within the last few years Congress has authorized, in addition to the Great Smoky Mountains National Park, the following National Parks in the East: Shenandoah National Park in Virginia, the Mammoth Cave National Park in Kentucky, and the Isle Royal National Park in Michigan. One branch of Congress has voted to authorize the Everglades National Park in Florida.

Asheville Is Gateway to This Land of the Sky

Melville Chater, in a communication to the National Geographic Society, describes this mountain wonderland which may soon become the playground of the East:

"A few hours' drive farther into the mountains brought us to Asheville, the gateway to what North Carolinians have well named the Land of the Sky. Never was an altitude of half a mile above sea-level so unobvious, in all but the tonic atmosphere. Set in a vast bowl, Asheville is encircled by mountains whose twenty highest peaks top all altitudes in the Eastern States. Could the Titans return, they might appropriately seat themselves on the surrounding crests of this mammoth amphitheater as spectators of one of Asheville's big golf or tennis meets.

"It was on the Biltmore estate, near Asheville, that, with the founding of a forestry school, the first steps in American forest conservation were taken.

"To-day there are established in this region, for the protection of watersheds and hardwood reserves, the Cherokee, Nantahala, Unaka and Pisgah national forests. In the Pisgah, established in 1916 as a game preserve, native bear and deer roam, trout streams are stocked, and herds of bison and elk have been implanted.

Industries and Customs of Long Ago

"Surrounded by the modishness of Asheville, one scarcely realizes that only 50 miles away mountaineers are living a ruggedly simple existence behind handhewn timbers and on small 'switchback' farms, with Revolutionary looms and spinning wheels alongside their chimney pieces of native rock.

"It was a farseeing woman from among the 'boiled-shirt' life of Asheville who persuaded these remote, almost forgotten, mountain folk to set their long-idle looms going again. To-day there are half a dozen handicraft centers scattered through western North Carolina.

"A 75-mile stretch of ideal motor-coaching up the foaming course of the Tuckasegee River took us past big paper-pulp and acid-wood plants to the Cherokee Indian Reservation at the foot of the Great Smoky Mountains.

Legend Tells of a Great Buzzard

"A Tsalagi (Cherokee) legend tells how the great buzzard, sent forth to scout after the Flood, became exhausted upon reaching the Smokies, and that wherever his wings smote the earth a valley appeared, peaks remaining wherever he soared.

"Nothing could better convey a picture of this wild region, with its abruptly alternate heights and depths. For 40 miles in an airline along the Great Smokies' crests, and from 25 to 30 miles as measured over them from North Carolina into Tennessee, all is primitive, uninhabited forest, such as the post-diluvian buzzard beheld.

"In 1540 Ferdinand de Soto found the Cherokees living along the Appalachian range in regions which are now incorporated in eight States. Three centuries later, when the remnants of this once-powerful tribe were transferred to Indian Territory, some few thousands of them took refuge in the Great Smokies. Ultimately, with the Government's cooperation, they settled on their present lands.

in various designs, while the accompanying horse is decorated with mirrors and 2-foot plumes resembling large feather dusters. These elaborate vehicles are used both for business and pleasure (see cover illustration).

A poverty-stricken Palerman prince, baron or count will go without food to hire a carriage or feed a steed he is not able to own, to join the fashionable procession. When a noble cannot afford a private rig, he joins with another noble and purchases one. Since each noble must have his coat of arms emblazoned on the doors, these "party rig" owners solved this problem by each one providing his own doors. So, when the tired horse returns to the "palace" with the prince, off come his doors and on go those of the duke or baron, who sedately rides off in his "private" equipage.

On the wide thoroughfares, and the thousands of crooked, alley-like side streets that are seldom more than a few blocks long, one meets with hospitality and courtesy.

Note: For supplementary references and photographs, including many pictures in natural color, see "Sicily, Island of Vivid Beauty and Crumbling Glory," *National Geographic Magazine*, October, 1927; and "Zigzagging across Sicily," September, 1924.

Bulletin No. 3, November 30, 1931.

© *Photograph by F. Galifi Crupi*

HIS STAFF INDICATES HE SELLS GOAT MEAT

A wandering butcher of Sicily peddling his wares through the streets. The goat's head is a symbol like the barber pole, which has come down from the days when few people could read.

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Diamonds, Some Work and Some Merely Glitter

DOES your family own between $150 and $200 worth of diamonds? If so it holds its average share of United States wealth in these precious stones. The most recent estimate places the value of diamonds owned in the United States at a figure exceeding four billion dollars.

Diamond imports fell off in 1930 along with most other imports, but even with a reduction of one-third from the peak importations of the preceding year, more than half a million carats of diamonds valued at over $30,000,000 entered the country.

Not All Diamonds for Adornment

One reason why diamond importations held up better than the importations of some other commodities, even in a year of depression, is that not all diamonds are destined to shine forth from jewelry that adorns men and women. More than half the world's production of the stones, in quantity, is used in industry, many in ways surprising to the layman. Some form bearings for watches, chronometers, electric meters, and other accurate instruments and laboratory apparatus. Some, in which tapered holes are drilled, are used for drawing fine wire of platinum, silver, gold, and rare metals. Much of the wire used for filaments for electric light and radio bulbs and other delicate apparatus is drawn through diamonds.

Other industrial uses for diamonds are as drills for glass, porcelain, and similar hard substances; turning-tools for lathe work; engraving points; and as cutting edges for rock drilling and sawing. For industrial purposes only the less nearly perfect and less valuable stones are used. More than half of the diamonds mined find their way into industrial use; but the value of these "working diamonds" is, of course, very much less than the value of the "patrician diamonds," used in jewelry.

U. S. Chief Consumer

Africa looms large in the diamond industry. Eighty-five per cent of all diamonds produced come from that continent—about half of them from South Africa. The United States is the world's greatest diamond-consuming country. Normally it absorbs nearly the equivalent of the entire South African output.

If all the diamonds produced in the world in 1929 could have been combined into a single cube it would have been 5½ feet across each face—a crystal block as tall as the average man and weighing more than a ton and a half. If the rough stones could have been brought together and dumped into bushel baskets they would have filled two dozens of them, heaped up.

Surface Fields Grow in Importance

In recent years a wealth of the gems has been literally scooped up from the earth in the regions of alluvial diamond deposits. Until this change in mining methods came about, the greater part of the diamonds had been mined for decades by laborious digging to great depths in the "pipes" of extinct volcanoes. Then came the slow work of separating the stones from earth and rock.

From one of the old "pipe" diamond mines near Pretoria, South Africa, opened in 1890, more than 130 million loads of blue clay have been dug, making a hole more than a thousand feet deep—a veritable man-made chasm that could swallow up some of the world's largest and tallest buildings. From this vast amount of material thirty million carats of diamonds have been extracted, valued at more than 162 million dollars.

The outstanding diamond fields of the alluvial kind were discovered only a year or so ago in Namaqualand, in the northwestern corner of Cape Province, South Africa. The diamonds occur in the loose sands of the seashore, and a considerable area is being mined by the Government of South Africa. The mining consists in scooping up the sand in steam and electric shovels, loading it on to flat cars, and transporting it to a plant where the gems are sifted out. In the first year more than $2,000,000 worth of diamonds was recovered.

Peculiar Oyster Shells Mark Diamond Deposits

The average weight of the seashore diamonds is unusually high. The largest so far discovered weighed 85 carats. A peculiarity about the Namaqualand diamond deposits is their occurrence along with the shells of a certain prehistoric oyster. This oyster shell has been a

Nowadays there are some 2,600 members of the Eastern Band of Cherokees living under the Great Smokies.

"A four-hour drive up the mountains from Asheville to Linville gave us another glimpse of that 'back of beyond' region which fringes western North Carolina. Here were pioneer cabins miles apart, streams fordable by a plank stretched between two tree-forks, occasional covered wagons with rifles slung inside, and dry-land sledges being used on 'switchback' farms.

"This is a country steep enough to justify the old joke about the mountaineer who broke his leg by falling out of his cornfield, and poor enough to justify that other stock joke about the would-be purchaser of a mountain farm who found thereon the tombstone of the man who had starved while trying to cultivate it."

Note: The Land of the Sky is further described and illustrated in "Motor-Coaching through North Carolina," *National Geographic Magazine*, May, 1926. For additional reading about the Shenandoah National Park region see "Virginia, a Commonwealth That Has Come Back," April, 1929. Isle Royal, the newest authorized unit in our system of National Parks, is the subject of "Winter Sky Roads to Isle Royal," December, 1931. For information about the Everglades see "Florida, the Fountain of Youth," January, 1930.

Bulletin No. 4, November 30, 1931.

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ONE OF THE PRODUCTS OF THE SMOKIES REGION IS MICA

Muscovite mica is found in the western part of North Carolina, usually in rough crystals, called blocks or "books," which can be split into sheets an inch or more in diameter, for use in lamps or as "peep-hole" windows in fire-boxes. Mica is also ground into flour and used in the manufacture of wall paper and lubricants.

convenient marker for prospectors: when a sand deposit contains the shells, diamonds are sure to be there also.

Two theories as to the origin of the Namaqualand diamonds hold that they were washed down into the sea from interior mountains and covered with sand; and that they were thrown up from the bed of the sea by a volcanic upheaval ages ago.

Diamonds have been found in all of the continents, but in none in such quantities as in Africa. Other sections of Africa besides South Africa contributing diamonds are Rhodesia, Tanganyika, Angola, Belgian Congo, and the Gold Coast. One of the earliest known sources of the world's diamond supply was India, and a few gems still are mined there.

Next to South Africa in importance as a diamond-producing region is Brazil. At one time 20,000 diamond miners were at work there, but the greater richness of the African mines and the greater ease of recovering the stones in Africa brought about a decline in the Brazilian industry. British Guiana is the only other important source of diamonds in South America. In the East, Borneo, Australia, and Tasmania produce some diamonds, and a few have been discovered in Siberia. In Europe a negligible quantity of diamonds has been found, chiefly in the Ural Mountains of Russia, and in Lapland. Small stones have come to light in alluvial deposits in various parts of the United States, but no fields of importance have been discovered in North America.

Note: For additional reading students should consult: "Under the South African Union," *National Geographic Magazine*, April, 1931; and "Cairo to Cape Town, Overland," February, 1925. Brazil, another leading diamond producer, is described in "Gigantic Brazil and Its Glittering Capital," December, 1930.

Bulletin No. 5, November 30, 1931.

© *Photograph by Melville Chater*

SORTING DIAMONDS TO HIM IS AS TAME AS SHELLING PEAS

The circular screens shown above are put into the upper of the two boxes. An electric motor jiggles the screens as the diamonds are poured in. The smaller stones fall through the screens; the larger ones remain. In this way many different sizes can be rapidly classified. Almost a million dollars worth of gems lie on the table before the sorter.